Amendments to the Specification:

Please replace the paragraph bridging pages 9 and 10 with the following paragraph:

-- A key event for the switch from inactive to active receptor is ligand-induced conformational changes of transmembrane helices 3 (TM3) and 6 (TM6) of the GPCRs that have 7 transmembrane spanning helices (U. Gether, and B. K. Kolbilka, *J. Biol. Chem.* 273, 17979-17982 (1998)~~.~~). These helical movements in turn alter the conformation of the intracellular loops of the receptor to promote activation of associated heterotrimeric G proteins. Mutagenesis studies (S. Cotecchia, J. Ostrowski, M. A. Kjelsberg, M. G. Caron, and R. J. Lefkowitz, *J. Biol. Chem.* 267, 1633-1639 (1992)~~;~~ E. Kostenis, B. R. Conklin, and J. Wess, *Biochemistry* 36, 1487-1495 (1997)~~.~~; M. A. Kjelsberg, S. Cotecchia, J. Ostrowski, M. G. Caron, and R. J. Lefkowitz, *J. Biol. Chem.* 267, 1430-1433 (1992)~~.~~) demonstrated that the third intracellular loop (i3) mediates a large part of the coupling between receptor and G protein. I3 loops expressed as minigenes have also been shown to directly compete with adrenergic receptors for Gq binding (L. M. Luttrell, J. Ostrowski, S. Cotecchia, H. Kendal, and R. J. Lefkowitz, *Science* 259, 1453-1457 (1993)~~.~~), or can activate G proteins as soluble peptides in cell-free conditions (T. Okamoto *et al.*, *Cell* 67, 723-730 (1991)).--

Please replace the paragraph bridging at page 43, beginning at line 12 with the following paragraph:

--The activation curves of PAR1 are biphasic with a steep activating phase followed by a steep inhibitory phase. Splitting the P1pal-19 agonist into C-terminal P1pal-7 and corresponding N-terminal P1pal-12 peptides results in loss of stimulatory activity in platelets or PAR1-Rat1 cells when added separately (FIGS. 1B, 1D, 2B) or together (FIG. 1B). Therefore, in order to have agonist activity, C-terminal PAR1 pepducin residues 301-313 must be contiguous. COS7 cells were transiently transfected with the human receptors PAR1, PAR2, PAR4, cholecystokinin A (CCKA), cholecystokinin B (CCKB), substance P (Sub-P), or rat somatostatin receptor (SSTR2). Transfected cells were challenged with a range of concentrations (0.1-10 micromolar) of P1pal-19, P1pal-13, or P2pal-21 and the highest stimulation of the individual receptors is reported as a black column. The extracellular agonists used to define maximum stimulation for each receptor (open column) were 10 nM thrombin for PAR1, 100 micromolar SLIGKV for PAR2, 100 nM thrombin for PAR4, 300 nM CCK-8 for CCKA and CCKB, 1 micromolar AGCKNFFWKTFTSC (SEQ ID NO:18) for SSTR2, and 1.5 micromolar RPKPQQFFGLM (SEQ ID NO:34) for Sub-P. The full activity profiles for P1pal-19 and P1pal-13 against these receptors are included as supplementary material ~~(Supplementary information is available on *Science* Online at www.sciencemag.org)~~.--

Please replace the paragraph bridging at page 46, beginning at line 2 with the following paragraph:

--It was found in some cases that lipidated peptides, based on their corresponding wild-type i3 sequences, were partial agonists with efficacies of 35% for MC4 (FIG. 7), 13% for PAR2 (P2pal-21, FIG. 2D) and 12% for CCKB, and no agonist activity was observed for the i3 peptides of PAR4, SSTR2 and CCKA (Table 1). However, as previously demonstrated, the P1pal-19 PAR1 peptide was able to robustly activate PAR2 (FIG. 2F) indicating that selective mutation of P2pal-21 might create a full agonist for PAR2. An alignment of the i3 loops of PAR1 and PAR2 (FIG. 2A: which shows the alignment of the third intracellular (i3) loops and adjacent transmembrane regions (TM5 and TM6) for PAR1, PAR2 and PAR4 receptors with palmitoylated peptides for PAR1 and PAR2) revealed several sequence differences. Quite strikingly, mutation of the C-terminal Lys to Phe converts the PAR2 peptide, P2pal-21F, into a potent (EC50 = 25 nM), full agonist of PAR2 with biphasic properties (FIG. 2D). P2pal-21F also activated PAR1 but not PAR4 nor SSTR2 (FIG. 2G). Similar C-terminal Lys/Arg to Phe point mutations of the SSTR2 and CCKA peptides conferred partial agonist activity with their cognate receptors and improved the potency of the CCKB peptide by 15-fold. ~~Supplementary information is available on *Science* Online at www.sciencemag.org~~ --